

City of Tucson/Pima County

HOUSEHOLD HAZARDOUS WASTE PROGRAM

Annual Report - Fiscal Year 2009

STATE OF THE PROGRAM

Ann Marie Wolf, Steering Committee Chair



These are interesting times in the world of Household Hazardous Waste (HHW). As a staff member or volunteer, over the past couple years, you might have learned: 1) how heavy televisions can be, 2) how angry people may get when you tell them HHW doesn't accept an item anymore, and 3) how rewarding it is to know that you contributed to helping over 37,000 citizens keep 1.4 million pounds of hazardous materials out of landfills, wastewater, and/or groundwater. In the current economic times, HHW programs across the country are facing or will soon be facing many challenges and many opportunities. The City of Tucson/Pima County Program is no exception.

Challenges

It goes without saying that the biggest challenge is the financial challenge. As government budgets become tighter and tighter, HHW programs are always at risk of losing funding for existing operations. Luckily, local administrators, politicians, and activists have seen the amazing success of the City of Tucson/Pima County program. The dedication of our volunteers and staff in demanding a financially responsible program, combined with the understanding of the possible impact of a resource such as HHW not being available to citizens, makes a compelling case for continual support. Not to mention the fact that clean up costs from illegal dumping and long term environmental remediation efforts can easily dwarf the program's \$677,000 annual operating budget.

Management of emerging hazardous materials is a challenge that we continually face. Items such as fluorescent light bulbs, pharmaceuticals, electronic scrap, and byproducts from home biodiesel production were not always on the HHW radar screen, but we have adopted procedures or are in the process of analyzing strategies to effectively manage them through the program.



In January 2008, the program successfully partnered with Tucson Clean and Beautiful to hold public collections of "electronic scrap" such as TVs, VCRs, stereos, and computers. The collections were well received and have since had some private efforts replace them, but a turnkey HHW solution might be needed soon.

Most people have no idea that the safest outlet for a private citizen to dispose of some unused and expired prescription drugs [some may be controlled substances] is through law enforcement or a law enforcement sponsored effort. In 2009, the program stopped collecting pharmaceutical waste from participants because of the potential risks associated with having controlled substances mixed in with the materials. Since then, a local stakeholder group has worked with the DEA to develop an acceptable disposal process and the Oro Valley Police Department has successfully completed several collections to validate that process. In 2010 we hope to rollout a similar process with the assistance of the Tucson Police Department and the Pima County Sheriff's Department.

Opportunities

As you can see on the back of this Annual Report, the program communicates "5 Actions you can take" to reduce the risk to the environment and reduce the amount of household hazardous waste generated. They are: 1) buy only what you need, 2) read and follow labels, 3) store properly and in labeled containers, 4) take leftover quantities to the program, and 5) use safer alternative products when possible.

A couple of these actions are being promoted and advanced as a result of these tough times. A large share of what is received is "unused" material such as paint, pool chemicals, and pesticides. As economics factor in, people will naturally tend to "buy only what they need." With the current focus on "Climate Change," companies are working on "greening" initiatives and products. Many of the hazardous products that have been commonplace for several years are now coming out in less-hazardous, biodegradable, or non-hazardous versions. Companies are seeing new markets for safer alternatives and hopefully it will result in a decrease in the amount of HHW generated.

Despite the program's challenges, we are optimistic for continued success, because as the quote goes, "Challenges are what make life interesting; overcoming them is what makes life meaningful."

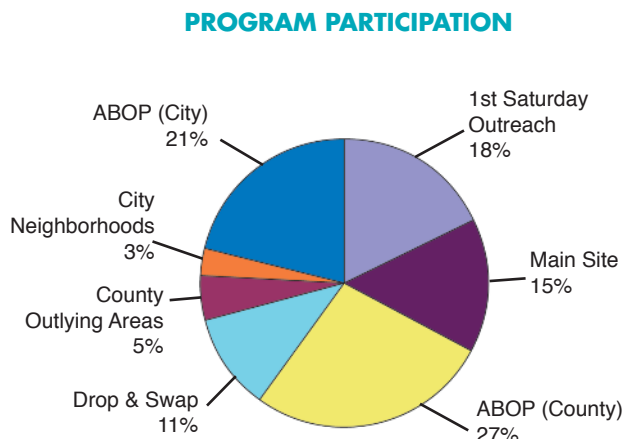
PROGRAM PARTICIPATION

Public participation in the program is tracked yearly in six different categories, which are listed in Figure 1. Annually all categories tend to fluctuate slightly depending on operational changes that may affect participation. This year in particular a major event significantly affected the 1st Saturday Outreach category. The Northwest (NW) satellite outreach collection, which over a decade had been established at the Park & Ride Parking lot located on Ina Road and Via Ponte, was moved. Early in the year, Pima County notified the City that this location would no longer be available, and the property was subsequently sold in October. After searching for a suitable replacement site, the best site available was chosen at the Pusch Ridge Christian Church parking lot, 440 W. Calle Concordia. Although this location is within the Town of Oro Valley, it primarily serves unincorporated Pima County residents. It is however, available to any resident living within Pima County.

The first NW collection at the new location, held in January 2009, received low participation but quickly recovered to normal activity. This collection site averages between 120 and 150 residents monthly.

- Total public participation for the year was over 35,000;
- Over 7,700 participants used a program service for the first time, 22% of the total participation;
- Annual participation for the 1st Saturday outreach events was 4,340 for the Eastside site, 1,665 for the NW site, and 354 for the Tucson Water Plant 2 site.

Figure 1 illustrates participation distribution for FY 2009.



Over 370 collection events were held, including:

**Blenman Elm & Central Neighborhoods
Feldman Neighborhood
Catalina del Rey Neighborhood**

**Green Valley
Tohono O'odham Nation
Town of Sahuarita
Tucson Estates Foothills Community**

Raytheon/Bombardier

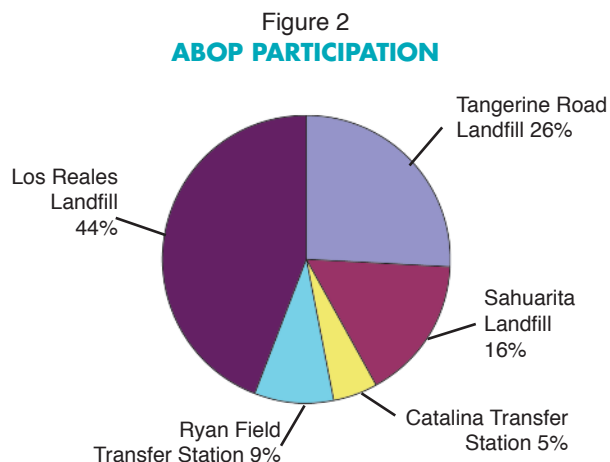
ABOP COLLECTION STATIONS

Public participation at the five ABOP sites has been steady in recent years. However, two of the Pima County sites, Catalina Transfer Station and Ryan Field Transfer Station, experienced slightly lower participation rates this year. This decrease is likely due to a change in their operating days. As a direct result of budgetary constraints, these sites are now closed four days of the week (open Thursday through Saturday from 7:30 a.m. - 3:00 p.m.). Overall ABOP participation increased as a result of an increase at the Los Reales collection station.



- Close to 17,000 residents participated through one of the five ABOP stations;
- Compared to last year, ABOP participation increased 4%;
- ABOP participation makes up 48% of the overall program participation.

Figure 2 shows FY 2009 participation at the ABOP Stations.



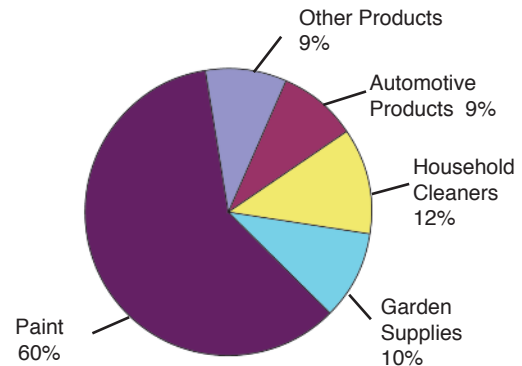
DROP AND SWAP

Many of the items collected by the program are still in good condition and the containers may be full to half-full. At the permanent collection site useful products are placed on tables and residents are allowed to select these products for reuse at no cost. This year over 3,700 residents took advantage of this free service. The reuse of products has proven to be a better option than hazardous material disposal. Redistributing these products for their original intent saves money, natural resources, and time.

- Over 26,000 items were returned to the community for reuse, including 25,390 gallons of latex paint;
- The public saved an estimated \$265,000 in out-of-pocket expenses through the use of this service;
- Over \$74,000 in disposal expenses were avoided as a benefit of redistribution.

Figure 3 illustrates the redistribution of the still-useful products collected in FY 2009.

Figure 3
PRODUCT REDISTRIBUTION



Pollution prevention and waste minimization goals are accomplished through the redistribution of useful consumer products

Small Business Waste Assistance Program

Most new businesses registered through the Small Business Waste Assistance Program (SBWAP) are referred to us through both the Fire Department's customer service desk and Environmental Services' customer service personnel. Businesses call the City inquiring about disposal services for their waste materials. In some cases the business owners or managers have an inclination that their wastes should not be thrown out with their regular trash, and they may not even know they are dealing with a regulated hazardous waste. Staff receiving these cold calls ask a series of questions to determine what type of materials are being disposed of and to determine eligibility. Essentially any business that generates less than 220 pounds per month of regulated hazardous waste is eligible to dispose of their waste through this service. But not all hazardous materials are hazardous wastes and some materials can be accepted in larger quantities, including latex paints and used oil. Even though the majority of businesses using this service are newly registered businesses, the number of repeat customers in the SBWAP has been increasing significantly.

- Total waste collected increased 4% over last year and generated over \$15,000 in revenue;
- Fifty-eight percent of the businesses participating this year were newly registered with the SBWAP;
- Since the SBWAP was instituted in 1993, over 531,000 pounds of waste have been collected from small businesses.

Table 1 provides a summary of the FY 2009 activity for the Small Business Waste Assistance Program.

Table 1. SBWAP Summary

	FY 2009
New Businesses Registered	60
Businesses Registered (1993 - June 30, 2009)	895
Participating Businesses	103
Waste Received (pounds)	58,945
Revenue	\$15,089

WASTE STREAMS

Twenty years ago, when the program was established, used motor oil was one of the key household hazardous materials collected from the public for proper disposal. Its hazardous nature and the detrimental effects oil can pose on the environment is why this material must be disposed of properly. Used motor oil can contain toxic substances such as benzene, lead, zinc, and cadmium. The oil from a single oil change (approximately 1 gallon) can contaminate a million gallons of drinking water, the supply of 50 people for one year. Motor oil can also interfere with the efficient processing of the local sewage treatment plants, and it can contaminate stormwater runoff when dumped on land. There was a time in past years when used oil was a problem waste to dispose of. Only limited companies would accept it [for a fee]. It would then be blended with flammable materials such as gasoline or jet fuel, and then marketed as an alternative fuel. Alternative fuels are burned for their energy content in industrial processes such as cement kilns and asphalt plants. Nowadays many companies compete to buy the used oil collected. The current contractor used by the program that accepts this oil re-refines it into an industrial grade lubricant. The current process is preferred because re-refining is energy efficient – less energy is required to produce a gallon of re-refined lubricant than to produce the same lubricant from crude oil.

- This year, close to 56,000 gallons of used oil were collected and re-refined (recycled) into an industrial grade lubricant;
- At an average price of \$0.54 per gallon, used motor oil generated over \$30,000 in revenue;
- Of the 708 tons of waste collected this year, 98% were beneficially reused or recycled.

The table below shows waste collected, by waste stream, weight, and ultimate fate. Figure 4 shows the materials diverted from the land fill and wastewater treatment plants, and Figure 5 shows the ultimate fate of those diverted materials.

Diverted Materials Table

Waste Stream	Pounds FY 2009	Fate	Waste Stream	Pounds FY 2009	Fate
Acid	8,972	Treatment	Latex Paint	253,900	Redistribute
Antifreeze	36,080	Recycle	Latex Sludge	147,860	Recycle
Auto Battery	127,825	Recycle	Mercury Waste	147	Recycle
Base	3,634	Treatment	Metal/Cardboard	79,455	Recycle
Chlorinated Liquid	5,298	Fuel	Oil Filter	951	Recycle
Computer/Electronics	46,750	Recycle	Oxidizer	516	Treatment
Drop & Swap	75,934	Redistribute	Paint Sludge	116,100	Fuel
Dry Battery	4,791	Recycle	Pesticide	10,860	Treatment
Flammable Liquid	12,795	Fuel	Propane Tank	12,975	Recycle
Flammable Solid	128	Treatment	Soap and Wax	20,837	Fuel
Fluorescent Lamp	4,675	Recycle	Used Oil	445,760	Recycle
Inkjet/Toner Cartridge	537	Recycle			
TOTAL: 1,416,780 pounds					

Figure 4
DIVERTED MATERIALS

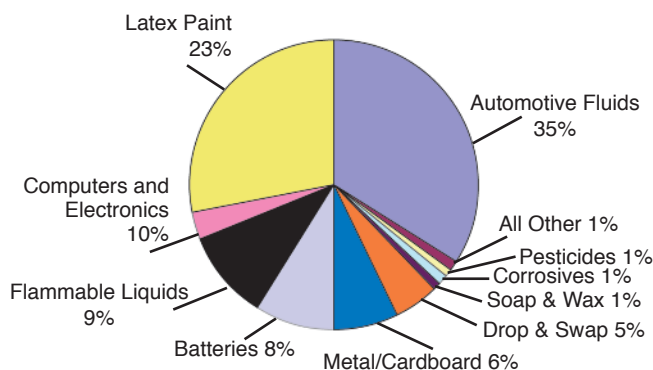
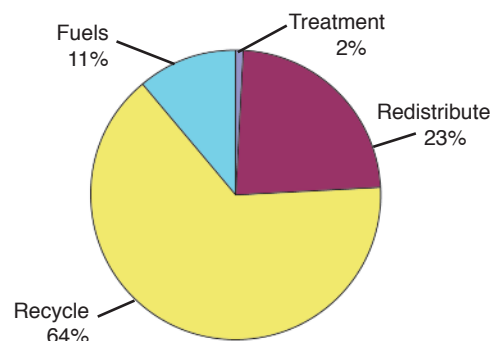


Figure 5
FATE OF DIVERTED MATERIALS



BUDGET

This year the national economic downturn significantly affected State, County, and City budgets. In response the City restricted certain expenses and directed all departments, including the Fire Department, to closely manage expenses and implement cost savings measures without adversely affecting essential services. Switching from a non-binding service agreement to a 5-year contract for the recycling of used oil helped in part with these efforts. The new contract established a minimum price per gallon paid to the program for the recycling of used oil. This effort helped steadily increase revenues for the year. As a direct result of cost savings efforts and additional revenues for used oil, close to \$20,000 of the program's operating budget were credited to both City and County funding sources.

- Total program expenses continue to increase annually, mainly due to increased disposal and operating supplies costs;
- Total disposal expenses increased 10%, primarily due to an increase in contract disposal pricing;
- Over \$68,000 of scrap metal, lead-acid batteries, used oil, and SBWAP revenue helped offset total program operational and disposal expenses.

Table 3. Program Expense Summary

	FY 2009
Annual Operating Budget	\$677,784
Total Disposal Cost	\$90,221
Total Pounds Processed	1,416,780
Program Cost per Pound	\$0.48
Disposal Cost per Pound	\$0.06

**Tucson Fire,
Tucson Environmental Services and Pima
County Regional Wastewater Reclamation
support the program**

VOLUNTEERS

Many thanks to all our volunteers!

Volunteers have always been an integral part of the success of the program. Each month at outreach collection events, trained volunteers work in various capacities. Volunteers greet the public to obtain some basic information from the participant (resident dropping off materials). The information requested is their zip code, and



if it's a new customer, how they became aware of the collection site. Other volunteers help the resident unload their materials from their vehicles ensuring we can accept the materials they are donating. Certain materials are restricted and cannot be accepted but our volunteers do an excellent job in screening each load. Another set of volunteers help sort the materials by hazard class at a sorting table and then pack the materials in shipping containers. Some volunteers enjoy to simply pour used oil or antifreeze into drums, and other volunteers enjoy doing a little of everything. Regardless of what job assignment each volunteer assumes, all volunteers are greatly appreciated for their hard work and public service.



This year 161 volunteers participated at collection events contributing a total of 2,139 service hours.

The efforts of our volunteers make an important impact on our community and the environment.

History

The program, a joint project between the City of Tucson and Pima County, was designed to collect household hazardous wastes from residents of our community. The formal program was inaugurated in 1989, and in 1990, a permanent facility was built. In the 20 years since the program's inception, over 17 million pounds of household hazardous waste have been collected and diverted from wastewater treatment plants and landfills in Tucson and Pima County.



Benefits

The main objectives of the program help to alleviate problems that can pose serious threats to human health and the environment.

HHW services help to:

- Protect children's health by minimizing potential home exposure;
- Protect Pima County's ability to effectively treat wastewater;
- Protect solid waste workers' health;
- Conserve valuable landfill space;
- Safeguard groundwater from potential leaching of contaminants.

Outreach & Oversight

The program also conducts education and outreach activities. The program recognizes that education must focus not only on raising the public's awareness of the collection program, but also on pollution prevention methods to reduce the generation of household hazardous waste.

The program Steering Committee provides oversight and direction for the program's activities. The Steering Committee is comprised of seven members representing professional, business, and government arenas, acting in an advisory capacity to the Tucson Fire Department.

COLLECTIONS

The program maintains several convenient collection sites. Every Friday and Saturday, the main facility, located at 2440 W. Sweetwater Drive, is open to receive household hazardous materials from 8 A.M. to 12 noon.

Monthly outreach collection sites are open on the first Saturday of every month (excluding holidays) from 8 A.M. to 12 noon.

These outreach sites are located at:

- **Eastside City Hall**
7575 E. Speedway Boulevard;
- **Tucson Water, Plant 2**
1102 W. Irvington Road;
- **Pusch Ridge Christian Church**
440 W. Calle Concordia

Antifreeze, Batteries, Oil, and Paint (ABOP) collection sites are available daily to residents during normal operating hours.

ABOP Stations are located at:

- **Los Reales, Sahuarita, & Tangerine Road Landfills;**
- **Catalina & Ryan Field Transfer Stations**

In addition, the Small Business Waste Assistance program (SBWAP) is available to assist qualified businesses at the main site. The SBWAP offers a

safe and economical option for businesses to properly dispose of their hazardous wastes.

Other collections are periodically held in outlying communities and within City neighborhoods.

The collection sites and stations are staffed by a combination of volunteers and program staff. When the main site is closed to the public, trained staff process the materials received by sorting and properly preparing the materials to be transported for recycling, reuse, redistribution, and safe treatment or disposal.



Program Goals

- Explore creative funding strategies to ensure adequate long-term funding for established collection services, for expanded service opportunities, and to implement education efforts;
- Enhance public education and outreach to focus on pollution prevention efforts by developing relevant information literature;
- Focus on increasing small business participation in the SBWAP by conducting outreach and speaking engagements to industry groups and establishing active partnerships with these groups;
- Expand the current volunteer program by expanding the training requirements and by improving recruitment efforts to reach other community volunteer groups;
- Safely and effectively eliminate, divert or recover costs for paints collected through the program by implementing new policies and by exploring new uses for recycled paints.

PROGRAM ORGANIZATION

City of Tucson

Robert E. Walkup.....Mayor

Council

Regina Romero.....Ward 1

Vice Mayor Rodney Glassman.....Ward 2

Karin Uhlich.....Ward 3

Shirley C. Scott.....Ward 4

Steve Leal.....Ward 5

Nina J. Trasoff.....Ward 6

Mike Letcher.....City Manager

Pima County

Board of Supervisors

Ann Day.....District 1

Ramón Valadez.....District 2

Sharon Bronson.....District 3

Raymond J. Carroll.....District 4

Richard Elías, Chairman.....District 5

C.H. Huckelberry.....County Administrator

Steering Committee

Ann Marie Wolf, Chair
Sonora Environmental Research Institute, Inc.

Paul Kramkowski, Vice Chair
Raytheon, Environmental Health & Safety

Harold Maxwell
Tucson Water Department

Andrew Quigley
City of Tucson Environmental Services

Ken Roberts
Pima County Facilities Management

Seth Ruskin
Tucson/Pima County Community Representative

Walter Valencia
Pima County Regional Wastewater Reclamation

Administration

The Household Hazardous Waste Program is administered by :

Tucson Fire Prevention Section
300 S. Fire Central Place,
Tucson, AZ 85701-1640
Phone: 520/791-4502
Fax: 520/791-5346
Web Site: www.tucsonaz.gov/hhw



Patrick Kelly.....Fire Chief
Randy Ogden.....Assistant Chief Division V
Dan Uthe.....Deputy Chief / Fire Marshal

Program Staff

Frank Bonillas.....Environmental Services Superintendent
Bill Bendorf.....Environmental Services Supervisor
Don Campbell.....Equipment Operation Specialist
Anthony Diaz.....Environmental Services Equipment Operator
James Foley.....Senior Environmental Services Worker
Eric Hart.....Environmental Services Worker
David Maxey.....Senior Environmental Services Worker
Dennis Zygel.....Environmental Services Equipment Operator

Support Staff - Los Reales Landfill ABOP

Angel Flores.....Senior Environmental Services Worker
Daniel Lopez.....Environmental Services Worker



ADDITIONAL INFORMATION

Additional information about the Household Hazardous Waste Program is available on the following web sites and phone lines:

United States Environmental Protection Agency
www.epa.gov

Arizona Department of Environmental Quality
www.azdeq.gov

Pima County Department of Environmental Quality
www.deq.pima.gov

City of Tucson
www.tucsonaz.gov/hhw

Tucson Clean & Beautiful and Recycling Information Line
www.tucsonaz.gov/tcb
520-791-5000

Earth 911
www.earth911.com
1-877-EARTH911



5 Actions you can take

- Buy only what you need.
- Read and follow labels.
- Store properly and in labeled containers.
- Take leftover quantities to the program.
- Use safer alternative products when possible.



**HOUSEHOLD HAZARDOUS
WASTE PROGRAM**

Tucson/Pima County

Household Hazardous Waste Program
2440 W. Sweetwater Drive
Tucson, AZ 85705-6921

Protect Your Environment

PRESORTED
STANDARD
US POSTAGE PAID
TUCSON, AZ
PERMIT NO 426